

## **Comments re the 2012 Puget Sound Action Agenda.**

### **Executive Summary**

Page 1

This section needs to clearly define what is meant by “Puget Sound”. Most people quite logically conclude it is inland salt water body defined as Puget Sound, and most people mentally include the Strait of Juan de Fuca, the portion of the Strait of Georgia in Washington State, and the waters around the San Juan Islands. However, the partnership, and perhaps the enabling legislation, has stretched the definition to include all the drainage basin, so it now includes forests, farms, homes, businesses, roads, lakes and rivers.

What is meant by “Puget Sound” is not clear.

Page 13, goal 1, indicator swimming beaches

This calls for

“All monitored Puget Sound beaches meet enterococcus standard.”

It lays out key strategies C11.3, C11.4 and C2.3 as the means to accomplish this. This needs to have a reality check. Wildlife, particularly large flocks of birds, can easily cause exceedences of bacterial standards, and we really do not need to be wasting time and effort to try to solve this in most cases. The 2020 indicator target summary could be changed to:

All monitored Puget Sound beaches do not exceed enterococcus standards from human causes.

This issue needs to also be acknowledged in the discussion about C11.3 and C11.4 on pages 262-264, and the discussion about swimming beaches on pages 239-240. There is no mention in either of these locations of how natural wildlife can also contribute to exceedences of bacterial standards. Where exceedences are likely to be caused by wildlife, we should be able to avoid heroic efforts to try to track down and solve the non-problem.

Page 26, Table re strategy C, subtask 1.1, NTA # 1.

This describes work by Ecology to complete a PAH Chemical Action Plan by 2012, and a CAP for PFOs or all PFCs by 2013. The following should be added:

Identify where reductions have benefit and where they are not needed.

The reason behind this is blanket reductions for reduction sake are not always needed or beneficial. For example, use of creosote on telephone poles has much less potential for impacts from PAHs than use of creosote on pier pilings in waterbodies.

Page 26, Table re strategy C, subtask 1.1, NTA #3.

This pertains to water quality standards and sediment standards updates to reflect higher fish consumption rates. It presumes that revisions to the standards will be required, and the performance measure would show a failure to perform this if the standards were not revised. This pre-judges an outcome, and should not. It is possible that our current criteria for human health are protective. For human health water quality criteria, EPA's guidance calls for protecting the average consumer to the  $10^{-6}$  or  $10^{-5}$  cancer risk level, as long as it is also protective of the high consumer at least to the  $10^{-4}$  cancer risk level. The guidance is also focused on freshwater and estuarine fish, not all fish. It's possible that our existing criteria may meet EPA's requirements. It does not make sense to protect high consumers at the  $10^{-6}$  risk level. A recommended change to the NTA description follows:

Water Quality and Sediment Standards Updates: The Northwest Indian Fisheries Commission and several tribes in the Puget Sound region (and other areas of the state) are examining existing information on fish consumption and in 2012 will provide recommendations to Ecology on tribal consumption rates to support ~~the~~ possible revisions to the standards. In 2012, Ecology plans to revise the state's sediment quality standards and begin the process to revise the water quality standards to reflect up-to-date information about rates of fish and shellfish consumption in Washington. If the existing criteria are not protective enough to meet EPA human health guidelines, then changes to the existing criteria may be needed.

Pages 26-27, Table re strategy C, subtask 1.1, NTAs 4 and 5

These pertain to the Department of Agriculture assembling data on the non-agricultural use of copper-based pesticides in Washington and also to evaluating alternatives to copper in pesticides to identify safer alternatives, and possible limiting the use of copper-based pesticides if better alternatives are available.

The problem here is that no effort is provided to determine if the use of copper-based pesticides is actually a problem. Ecology's phase 3 stormwater toxics loading studies did identify higher concentrations of copper from agricultural land use than other land uses, but the same data also showed higher hardness values and much higher dissolved organic carbon values. Our present freshwater copper criteria are based on hardness, and most all of the agriculture runoff data met the hardness based water quality criteria for dissolved copper. There were four samples from the site AG143 in the Puyallup watershed that did not meet the hardness based criteria, but these had high dissolved organic carbon which would have rendered the copper non-toxic. (EPA's national recommended water quality

criteria for freshwater copper is based on the biotic ligand model, which factors dissolved organic carbon into the calculation.)

Page 27, Table re strategy C, subtask 1.2, NTA 1.

This strategy includes:

Ecology will establish a task force that will oversee a study evaluating toxic materials (including toxic metals and, possibly, phthalates) in roofing materials and recommend strategies for promoting less toxic alternatives.

We suggest that the following be added to the above sentence:

“or ways to use materials that minimize releases of toxic materials to receiving waters.”

Page 28, Table re strategy C, subtask 1.5, NTA 1.

This near term action calls for Ecology to “increase ... wastewater... compliance inspection and enforcement programs in Puget Sound.” The performance measure includes demonstrating a reduction in the “volume of wastewater discharge per year.”

Is there a problem with compliance and enforcement of wastewater facilities? What is the basis for reducing the volume of wastewater discharge being a performance measure?

At least as far as the NPDES program goes for municipal wastewater treatment facilities, there does not appear to be a need for increasing inspection and enforcement programs, or for reducing the volume of wastewater discharges.

## **Reduce the Sources of Toxic Chemicals Entering Puget Sound**

Page 176, NTA C1.5 NTA 1

This calls for increasing Ecology’s .... Wastewater.... Inspection and enforcement programs in the Puget Sound. The performance measure includes the volume of wastewater discharges reduced per year.

This is a silly metric that has no relationship to inspections and enforcement or to environmental benefit and should be deleted.

See related comment for Page 28.

Pages 224-225, C6.2 Reduce pollution loading to Puget Sound by preventing and reducing Combined Sewer Overflows.

Something needs to be acknowledged here regarding pollutant loading from combined storm sewer systems. In many cases, cities with combined systems and CSO events

probably have less pollutant loading to surface waters than those with separate systems. The reason is that much of the stormwater that enters a combined system actually receives secondary treatment prior to discharge to well designed and sited deepwater outfalls, while in a separated system, much of the stormwater flows to surface nearshore water with less treatment and less initial dilution.

#### Page 230, Target View: Dissolved Oxygen in Marine Waters

The first paragraph says:

“When levels of dissolved oxygen get too low, fish and other animals may die, often in widespread “fish kills.”

What is meant by “widespread”? This seems to occur near the western shore in the southwest end of Hood Canal, and does not appear to be “widespread”.

The second paragraph needs the following sentence at the end.

The 2020 recovery dissolved oxygen target is also the existing state water quality standard.

#### Page 231, Ecology’s Marine Water Condition Index

The explanation of the index is inadequate. All it says is it combines measurements relevant to water quality. Furthermore, going to Ecology’s web site and looking it up crashes and provides nothing. The Puget Sound Partnership site has a little more, but is also inadequate. At least at the PSP web site it says that 12 different parameters are combined in the index. The web site doesn’t say what these are but it does say that dissolved oxygen is important. There needs to be an explanation of what the parameters are that go into the index, and how the summary numbers are generated. In color, it paints a picture of terrible decline, with 1999-2001 being almost all green and 2009-2010 being almost all red. What accounts for that change? Is it real or is it an artifact of the sampling? Each square is somehow summarizing 12 different parameters which in turn are measured over the year, with the number and timing of the observations varying from year to year.

#### Pages 239-240 Swimming Beaches

This section aims to have all monitored swimming beaches meet the bacteria standards. It is lacking a reality check. Wildlife can be a natural source of bacteria and cause exceedences. There are beaches along Puget Sound that are frequented by often many hundreds of birds of different species at different times of the year and these are bacterial sources that we should not be concerned with. Furthermore, when birds are the likely source, we ought not to waste resources trying to track down, identify, and solve other sources unless we have good reason to believe other sources are significant.

The first sentence should be changed to read:

The 2020 target for swimming beaches is that all monitored beaches do not exceed enterococcus standards from human causes.

There should also be some discussion about how wildlife, especially birds, can cause exceedences of bacteria standards.

See also the comments about page 28.

Page 257. C11.1 complete TMDL studies etc....

The second paragraph says

In Puget Sound, there are chronic hypoxia zones in Hood Canal, Budd inlet, Sequim Bay, and increasingly in areas of Whidbey basin and Quarter Master Harbor.

We are not aware of such an increase in the Whidbey basin. Data for Possession Sound (PSS019) and Saratoga Passage (SAR003) do not support a decrease for dissolved oxygen.

Page 262, C11.3 Restore and protect water quality at swimming beaches and recreational areas.

This section describes numerous activities that can contaminate water with bacteria yet it completely ignores wildlife, particularly birds. See comments about pages 28, and 239-240.

Pages 266-267, Target view: toxics in fish

It describes the need to reduce levels of PCB in fish to below two types of thresholds. One is related to fish health, and the other related to human health. On page 267 it present information on percentage of samples exceeding harmful effects thresholds for PCBs, and identifies the tissue threshold of 2400 ng/ PCBs/g lipid. What type of threshold is this? Fish health or human health?

This section also calls for reducing concentrations of two other classes of toxic contaminants (PAHs and EDCs) in herring and English sole below several different thresholds for harmful effects in fish. These threshold levels, whatever they may be, are not presented. Recognize that PAHs do not concentrate in fish. Rather, they are metabolized. The exposure to PAHs can cause damage. You probably need to say that the goal is to reduce PAH exposures for fish as evidenced by PAH metabolites in their livers, and liver tumor incidence. Check with Jim West at WDFW for better wording.

Pages 269-270 Marine Sediment Quality

This section describes monitoring of sediments in eight regions, and notes that four regions demonstrated likely impacted benthic communities. From the graph, two of those “impacted” communities would be the San Juan Islands and the Strait of Juan de Fuca. It seems highly unlikely that either of these areas will be impacted. Perhaps the biological community values for these are actually natural conditions or within the range of normal variability.

## **The Action Agenda in the Stillaguamish and Snohomish Watersheds**

Page 385, Pollution threats – Nutrient loading.

This section says that nutrient loading contributes to eutrophication and naturally occurring low dissolved oxygen concentrations in Penn Cove, Saratoga passage, Possession Sound.

Natural density stratification occurs in these water bodies, and with that there can be naturally occurring low dissolved oxygen. However, nutrient loading is not a contributing factor to eutrophication and the low dissolved oxygen. The wording should be changed to reflect that there is naturally occurring low dissolved oxygen in these waters, and nutrient loading might or might not be a concern.

Page 393, Implement coordinated integrated ecosystem monitoring program

The first bullet needs to be changed as follows:

Evaluate low dissolved oxygen levels in Possession Sound and develop and implement strategy to address low dissolved oxygen levels ~~as~~ if necessary.